

1 / 11

FIG. 1(a)

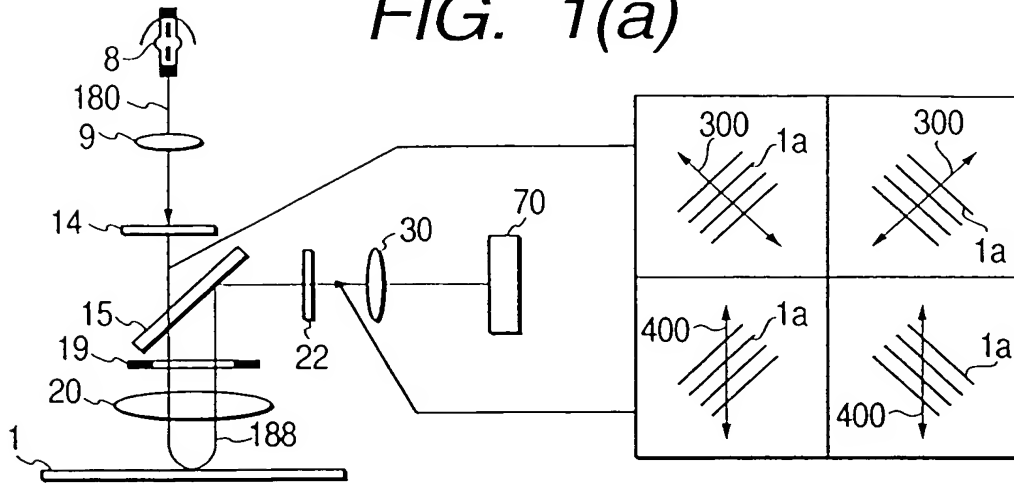


FIG. 1(b)

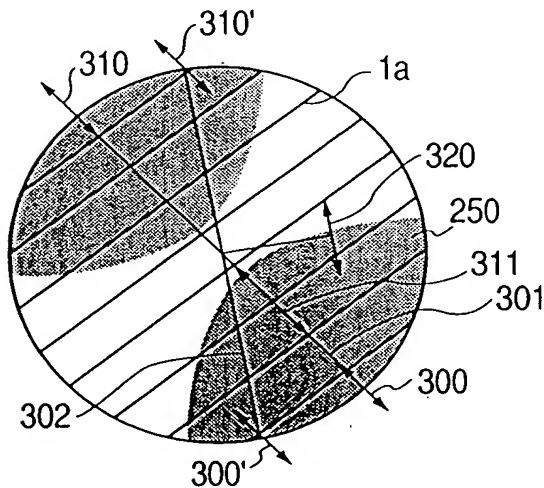


FIG. 1(c)

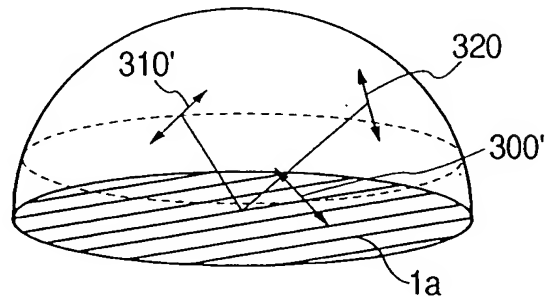


FIG. 1(d)

AMPLITUDES OF BOTH 0-ORDER AND
 HIGH-ORDER DIFFRACTED LIGHTS, AND
 TRANSMISSION AXIS OF AN ANALYZER

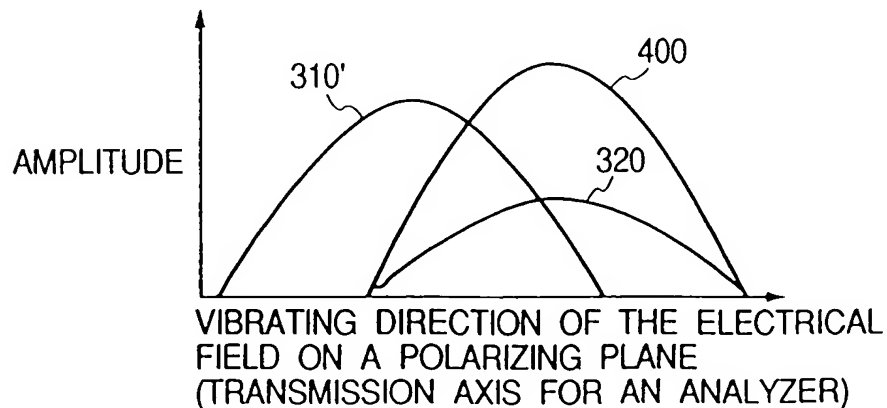
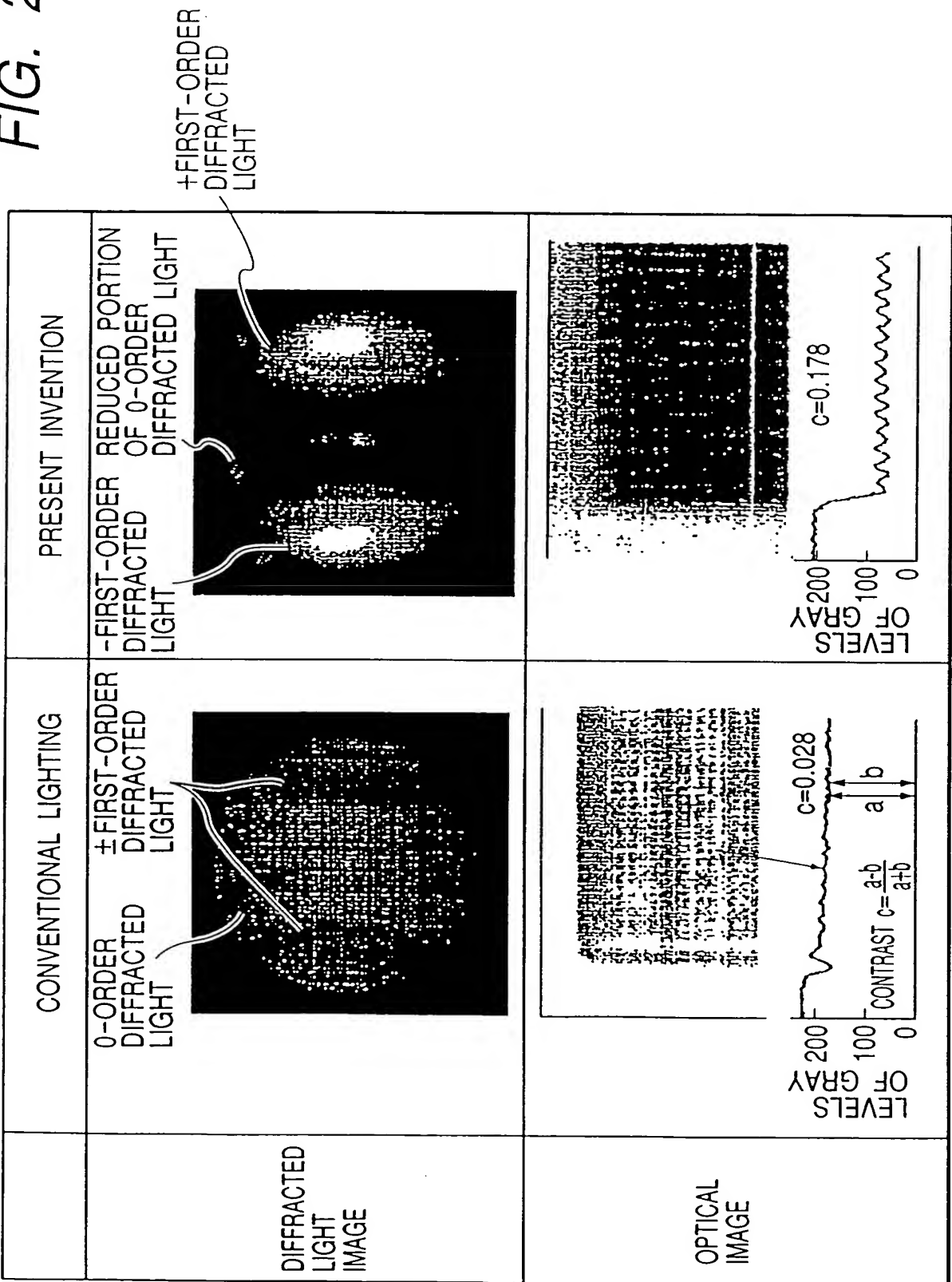
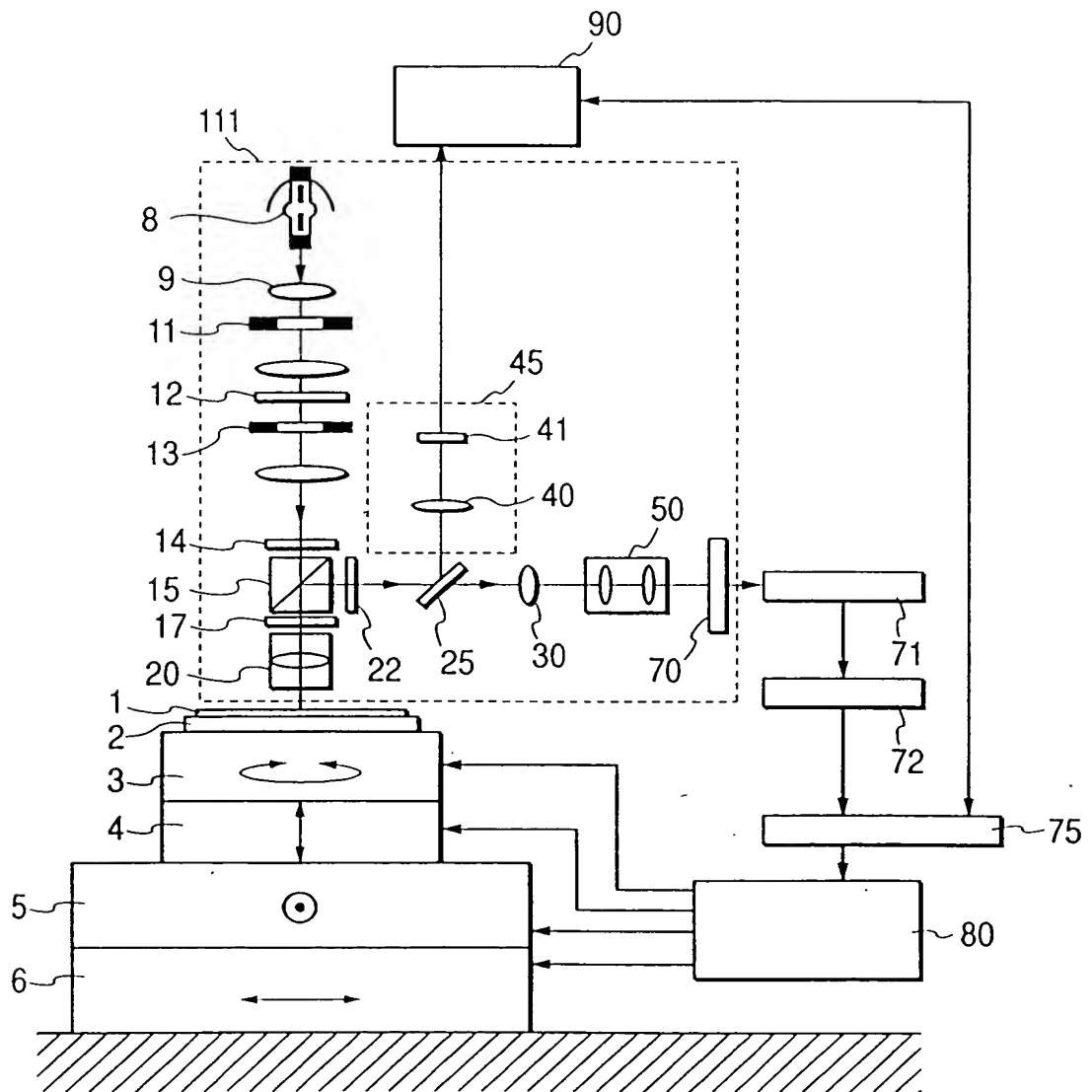


FIG. 2



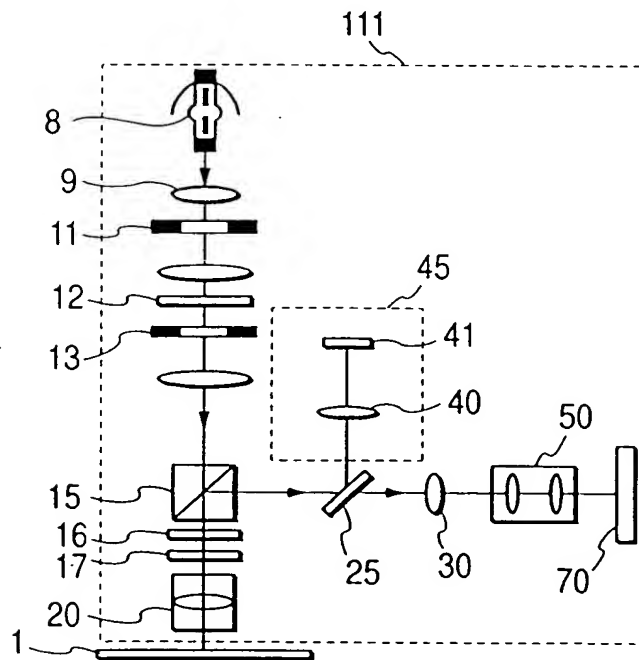
3 / 11

FIG. 3



4 / 11

FIG. 4



5 / 11

FIG. 5(a)

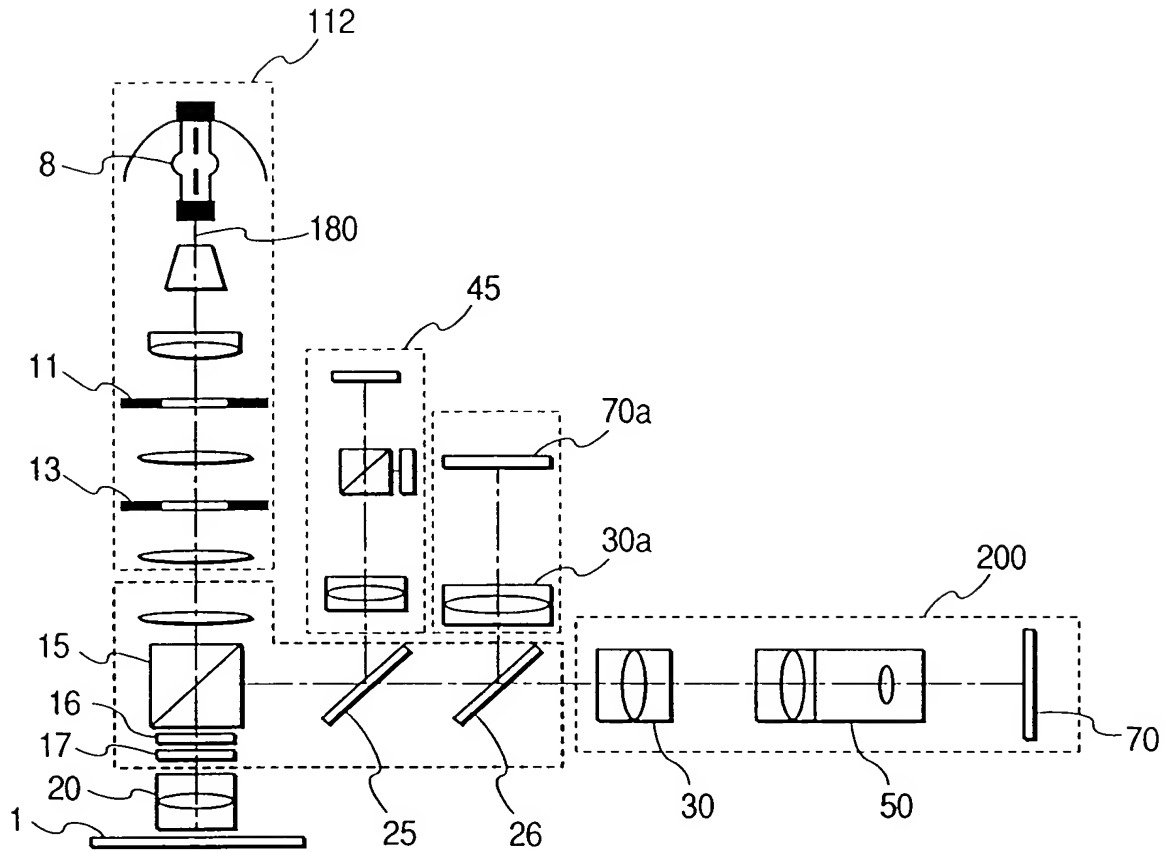


FIG. 5(b)

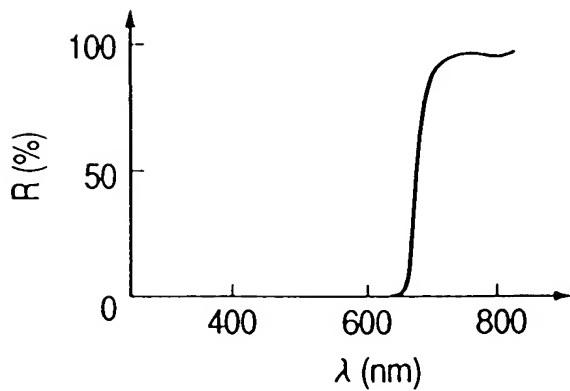
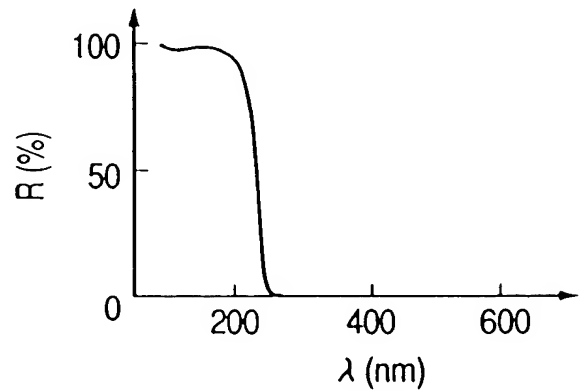


FIG. 5(c)



6 / 11

FIG. 6

RECIPE SCREEN

WAFER ID :

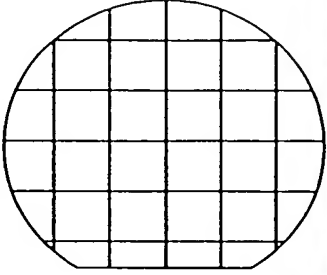
WAFER TYPE :

INSPECTION AREA :

INSPECTION METHOD :

IMAGE PROCESSING PARAMETER :

OPTICAL PARAMETER :



915


OPTICAL PARAMETER SETTING SCREEN

1. POLARIZING CHARACTERISTICS

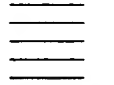
POLARIZING CHARACTERISTICS NO. :

→WHEN NOT SET YET, ENTER THE FOLLOWING CHOICES.


PATTERN TYPE




ORIENTATION
FLAT SIDE



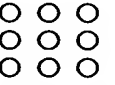
ORIENTATION
FLAT SIDE



ORIENTATION
FLAT SIDE



ORIENTATION
FLAT SIDE



ORIENTATION
FLAT SIDE

2. WAVELENGTH

WAVELENGTH SELECTING FILTER NO. :

→WHEN NOT SET YET, ENTER THE FOLLOWING DATA.

THICKNESS OF INSULATING FILM : μm


SPECTRUM REFLECTION FACTOR (FILE NAME) :

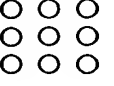
3. LIGHTING σ

APERTURE DIAPHRAGM NO. :

→WHEN NOT SET YET, SELECT ONE OF THE FOLLOWING CHOICES.

PATTERN TYPE





4. SPACE FILTER

SPACE FILTER NO. :

916

7 / 11

FIG. 7(a)

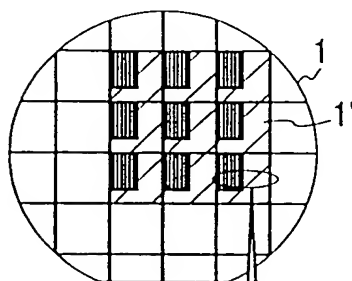


FIG. 7(b)

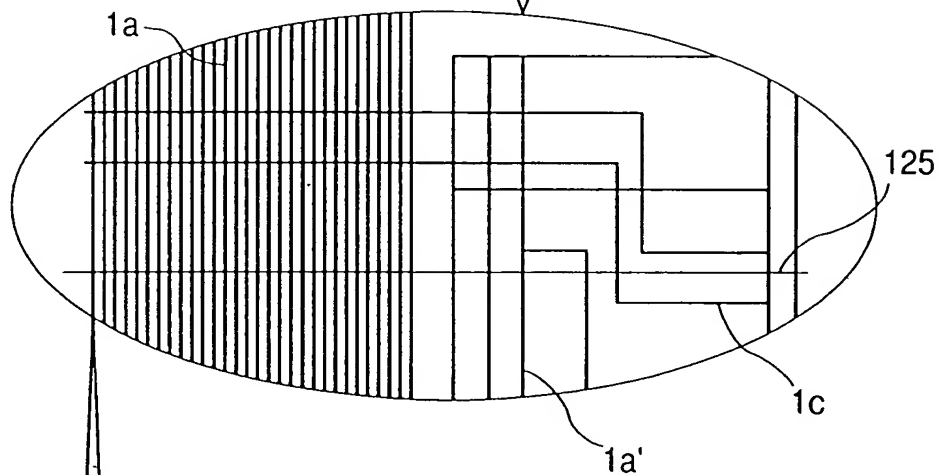
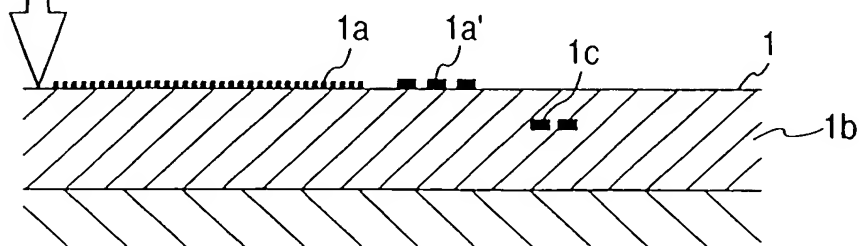


FIG. 7(c)



8 / 11

FIG. 8

OPTICAL PARAMETER SETTING FLOW

WAFER LOADING

MOVE OBJECT AREA TO
VISUAL FIELD OF OPTICAL SYSTEM

OPTICAL PARAMETERS

- 1) POLARIZING CHARACTERISTICS
- 2) LIGHTING σ
- 3) WAVELENGTH OF LIGHTING
- ⋮

916

920


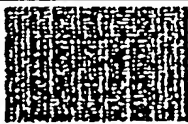


LIST OF OPTICAL CONDITIONS AND OPTICAL IMAGES

3) WAVELENGTH OF LIGHTING

2) LIGHTING σ

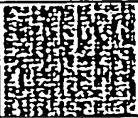
1) POLARIZING CHARACTERISTICS

LIST OF DIFRACTED LIGHT IMAGES AND PATTERN IMAGES

VIBRATING DIRECTION OF POLARIZED LIGHT		DIFRACTED LIGHT IMAGE	PATTERN IMAGE	CONTRAST	SUM OF SECONDARY DIFFERENTIAL VALUES	
LIGHTING	DE- TECTING					
$\theta: 30^\circ$	$\theta: 45^\circ$					
$\theta: 68^\circ$	$\theta: 45^\circ$					...

921


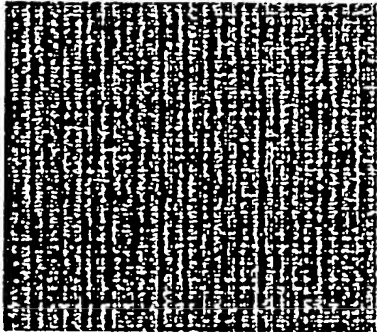
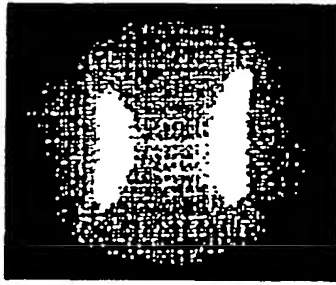
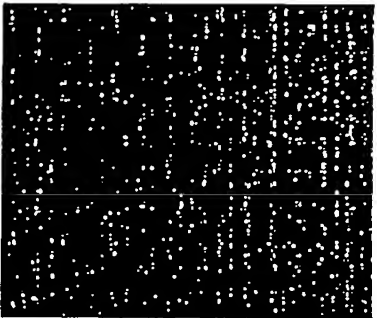

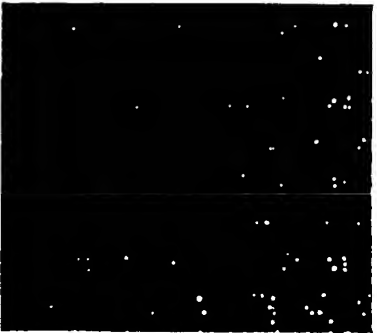
OPTICAL CONDITIONS AND PRELIMINARY INSPECTION RESULTS

OPTICAL CONDITION			PATTERN IMAGE	UNMATCHING COUNT IN NORMAL PORTION			RESULT OF COMPARATIVE INSPECTION		
LIGHTING	LIGHTING σ	WAVE- LENGTH		AVERAGE	MAXIMUM (N)	DEVIATION	DETECTED DEFECT COUNT	UNMATCHING COUNT IN DEFECT PORTION	S/N
									
					⋮				

DECIDE LIGHTING CONDITION

FIG. 9

920

VIBRATING DIRECTION OF POLARIZED LIGHT		DIFRACTED LIGHT IMAGE	PATTERN IMAGE	CONTRAST	SUM OF SECONDARY DIFFERENTIAL VALUES
LIGHTING	DE- TECTING				
$\theta: 90^\circ$	$\theta: 45^\circ$			0.25	198205
$\theta: 68^\circ$	$\theta: 45^\circ$			0.24	205331
$\theta: 0^\circ$	$\theta: 45^\circ$			0.03	65331
		• • •			

10 / 11

FIG. 10(a)

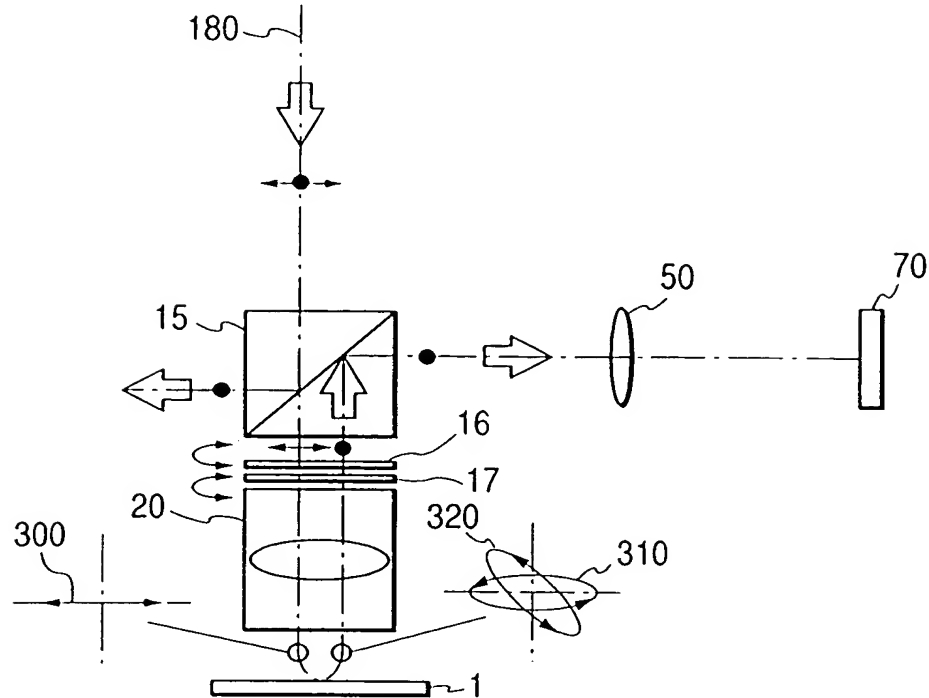


FIG. 10(b)

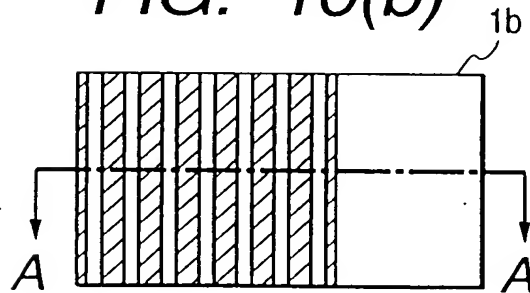


FIG. 10(c)

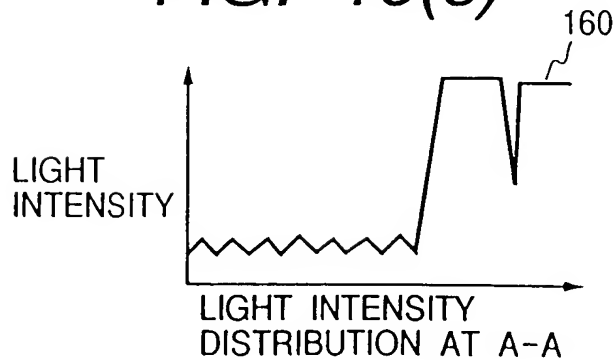


FIG. 10(d)

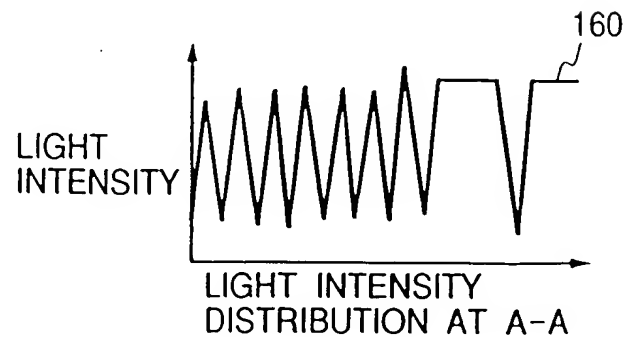


FIG. 11

